

ABSTRACT OF THE DISCLOSURE

An electronic endoscope system includes an image pickup device provided at a distal end of an insertion portion; an image signal processing device; a main light source; an auxiliary light source which emits less amount of light than the light emitted from the main light source; and a light guide member which guides illumination light emitted from one of the main light source and the auxiliary light source to the distal end of the insertion portion to thereby emit the illumination light from the distal end. When the auxiliary light source emits the illumination light instead of the main light source, the image signal processing device sets the gain of the signal output from the image pickup device to a value higher than the gain of the signal when the main light source emits the illumination light, in order to process the image signal.